

IN THE CASE OF

CHRISTOPHER WALLACE

ANALYSIS OF

PRESENT VALUE OF LOST EARNING CAPACITY

#### CERTIFICATION

We hereby certify that we have no interest, present or contemplated, in the above matter and that neither the employment to make the appraisal nor the compensation are contingent on the amount of the appraisal.

We certify that according to our belief and knowledge, all statements and information in the report are true and correct, subject to the underlying assumptions. We further certify that we adhere to the tenets of ethical behavior outlined in the National Association of Forensic Economics "Statement of Ethical Principles."

Michael L. Brookshire, Ph.D.

Forensic Economist

April 28, 2000

George A. Barrett, MBA Forensic Economist

April 28, 2000

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This analysis of lost earning capacity is based upon the statistics in Tables 1-37 and upon the following facts and assumptions.

- 1. Christopher Wallace was a white male who was born on July 24, 1962 and who died on April 17, 1999. Mr. Wallace was a high school graduate.
- 2. At the time of his death, Mr. Wallace was employed by G.E. Engine Services as a manufacturing machinist. His lost earning capacity is based upon his 1997 earnings, or \$46,810 in 1997 dollars.
- 3. Employer contributions to fringe benefits, such as social security, pension, and health and welfare plans, range from 27.34 to 29.24 percent of wages. These percentages are based upon actual employer contributions and national statistics from an annual survey by the U. S. Chamber of Commerce.
- 4. The impact of inflation on wages and on interest rates is offsetting; the present value of lost earning capacity can be found by computing "real" increases in wages and by discounting to present value using the "real" rate of interest. The net discount rate for these calculations is 2.22 percent annually (see Appendix I).
- 5. "Earning capacity with work-life adjustments" can be found either by computing the earning capacity each year and ending estimates at "work-life" expectancy or by reducing the earning capacity estimate for each year by a factor that considers life expectancy rates (L), work-force participation

rates (P), and employment rates (E). In this analysis the latter has been emphasized, and therefore cumulative loss columns in calculation tables become irrelevant. Losses are projected through life expectancy, but U. S. government data are already being used at every age to reduce for probabilities of death, retirement, disability, and unemployment.

- 6. Personal maintenance expenditures of Mr. Wallace are based upon 1997 U. S. Department of Labor Consumer Expenditure Survey data for poverty maintenance-level expenditures.
- 7. Personal consumption expenditures of Mr. Wallace are based upon 1997 U. S. Department of Labor Consumer Expenditure Survey data for consumption-level expenditures.

Based upon these facts and assumptions, the present value of lost earning capacity with continuous employment and personal maintenance deductions is \$1,598,708 (Table 9). The present value of lost earning capacity with continuous employment and personal consumption deductions is \$694,556 (Table 18).

The present value of lost earning capacity with adjustments for work-life expectancy and personal maintenance deductions is \$1,020,960 (Table 27). The present value of lost earning capacity with adjustments for work-life expectancy and personal consumption deductions is \$453,323 (Table 36).

These projections are summarized in Table 37.

TABLE 9

SUMMARY OF THE PRESENT VALUE OF LOST EARNING CAPACITY
WITH CONTINUOUS EMPLOYMENT
1999 - 2038

YEA** 9900120003 400067 89001123 401567 89001200220023 20014 20016 720022 20023 20033 4567 2003 3003 3003 3003 3003 3003 3003 300	E*7890123456789012345678901234567890123456	WAGES  ******  \$33,123  53,328  52,176  51,050  49,869  47,782  48,813  46,771  44,782  43,870  41,0158  41,0158  41,0158  38,792  38,438  37,0025  34,464  33,792  35,288  37,702  35,288  37,708  28,310  29,588  27,708  26,993  21,593  22,593  23,190  24,843  24,306  23,781  13,164	FRINGE BENEFIS** \$14,586576120033430144,95661213,07913312,12,12,12,12,12,12,12,12,12,12,12,12,1	PERSONAL MAINTENANCE ******* -\$17 -8,623 -8,437 -8,623 -8,9032 -7,75602 -7,75602 -7,934 -6,933 -6,737 -7,402 -7,934 -6,933 -6,633 -6,982 -7,984 -6,952 -5,453 -5,453 -5,453 -5,5,453 -5,453 -5,9890 -4,881 -4,881 -4,5881 -4,481 -4,481 -4,481 -4,481 -4,481 -4,481 -4,481 -4,481 -4,931 -3,846 -3,846 -3,931 -3,846 -2,931	TOTAL ******* \$36,285 58,75267 58,7527 58,7527 58,752,0883 48,76529 49,76529 49,76529 49,76529 441,66227 443,6637 440,0151 41,90238 387,6881 31,4801 334,3510	CUMULATIVE *******  \$36,547 153,553 265,547 153,309 425,319 425,476,980 8476,998 425,476,998 845,447 928,377 14,083,095 1,083,095 1,083,007 1,083,
C. WA	LLACE	\$1,438,609	\$393,316	-\$233,217	\$1,598,708	

TABLE 18

SUMMARY OF THE PRESENT VALUE OF LOST EARNING CAPACITY
WITH CONTINUOUS EMPLOYMENT
1999 - 2038

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2037 2038	63 30, 64 30, 65 29, 66 28, 67 28, 67 28, 69 27, 70 26, 71 25, 72 73 24, 74 75 23 76 13	76 14,265 13,957 47 13,656 13,361 13,072 12,513 12,513 12,513 12,243 11,468 11,721 11,468 11,220 11,468 11,220 10,741 10,509 10,741 10,509 10,061 10,978 10,741 10,509 10,843 10,741 10,509 10,843 10,741 10,509 10,843 10,741 10,509 10,843 10,741 10,509 10,843 10,741 10,509 10,843 10,741 10,509 10,741 11,748 10,509 10,741 11,748 10,509 10,645 10,645 10,645 10,792 10,843 10,741 11,7575 108 108 109 109 109 109 109 109 109 109 109 109	 25,747 25,190 24,647 24,114 23,0885 22,6920 21,698 21,695 20,21,698 20,21,698 20,21,698 20,21,698 20,21,698 20,21,698 20,21,698 20,21,698 20,21,698 20,21,698 20,21,698 20,21,698 20,21,698 20,21,698 20,21,698 20,21,698 20,21,698 21,798 2	41,739 66,756 115,690 139,3653 162,3653 162,9551 249,824 270,575 310,574 290,574 3129,941 367,429 437,4653 4437,4623 4437,470,624 470,524 470,524 470,624 470,
C. WALL	ACE \$1,438	,000 4000,000		

TABLE 27
SUMMARY OF THE PRESENT VALUE OF LOST EARNING CAPACITY
WITH WORK-LIFE ADJUSTMENTS
1999 - 2038

TABLE 36

SUMMARY OF THE PRESENT VALUE OF LOST EARNING CAPACITY
WITH WORK-LIFE ADJUSTMENTS
1999 - 2038

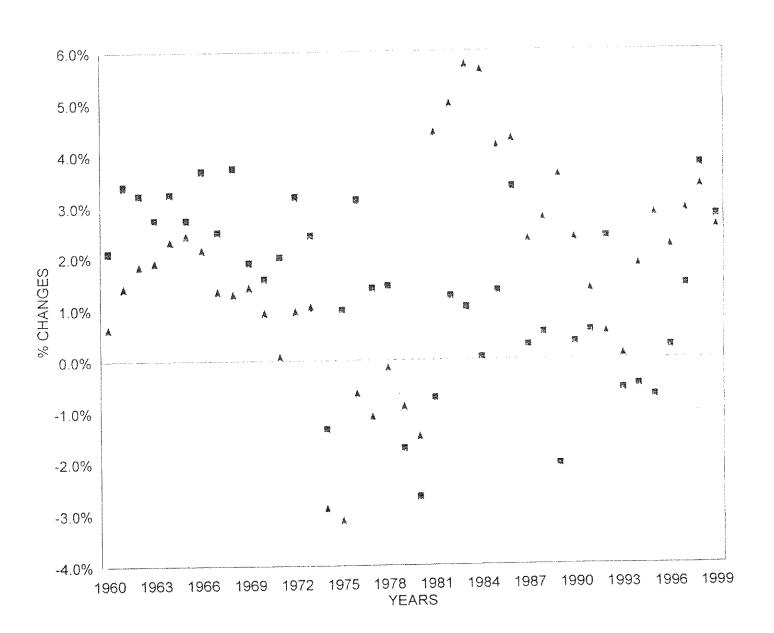
YEAR **** 1990 2000 2000 2000 2000 2000 2000 2001 2001 2001 2001 2001 2001 2001 2002 2003 2	AG**7890123456789012345678901234567890123456	WAGES **** \$29,598 45,477 444,237 41,237 41,237 41,180 38,5644 34,21,200 38,5644 34,337 32,0701 30,488 36,5644 34,835,644 34,835,644 34,835,644 34,835,644 34,733 32,0701 30,488 20,677 19,378 18,4668 20,415 33,488 31,050 21,415 33,4668 33,188 31,050 21,415 33,4668 31,4615 33,4668 31,4615 33,4668 31,4615 33,4668 31,4668 31,4615 31,461	FRINGE BENEFITS ***** \$8,480 13,297 12,660 12,351 12,660 12,3547 11,243 10,423 11,423	PERSONAL CONSUMPTION ****** -\$22,99 -36,840 -35,085 -34,229 -33,392 -32,574 -31,767 -30,396 -28,180 -27,767 -30,396 -28,180 -27,767 -30,396 -28,180 -27,767 -30,396 -28,180 -27,767 -30,396 -28,180 -27,767 -30,396 -28,180 -27,767 -30,396 -28,180 -27,767 -30,396 -28,180 -27,767 -30,396 -28,180 -27,767 -30,396 -28,180 -27,767 -30,881 -20,799 -16,799 -1	TOTAL  ****** \$14,553 23,8820 22,269 21,796 20,662 10,673 20,162 19,350 17,429 16,534 16,095 18,887 17,429 16,534 16,096 15,796 12,879 10,322 10,341 10,704 1,670 1,633 1,278 8,443 8,132 5,814 1,670 1,670 1,653 1,467 1,467 1,670 1,670 1,462 1,333 1,278 8,443 8,132 5,814 1,670 1,653 1,467 1,467 1,670 1,653 1,467 1,333 1,278 1,333 1,278 1,333 1,278 1,333	CUMULATIVE  *******  \$14,553 37,936 603,756 83,756 104,756 1186,025 104,761 186,076 204,426 222,7420 273,254 289,347 305,227 335,902 273,254 289,347 305,227 335,902 358,631 398,631 407,884 432,416 437,455 441,865 444,465 4447,455 4447,455 4447,455 445,945 4447,455 445,9455 446,9455 447,455 441,455 445,9455 441,455 445,9455 441,455 445,9455 441,455 445,9455 445,455 4453,323
C. WA	LLACE	\$903,392	\$264,156	-0174,450		

### TABLE 37

# SUMMARY OF THE PRESENT VALUE OF LOST EARNING CAPACITY IN THE CASE OF CHRISTOPHER WALLACE 1999 - 2038

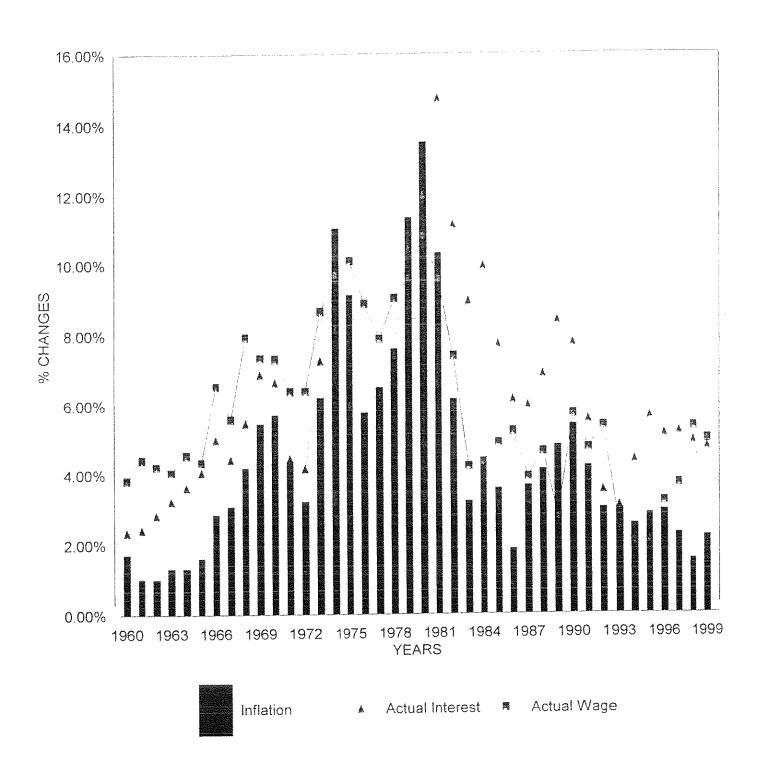
WITH CONTINUOUS EMPLOYMENT  LESS PERSONAL MAINTENANCE  NET LOSS	\$1,831,925 233,217 \$1,598,708
WITH CONTINUOUS EMPLOYMENT  LESS PERSONAL CONSUMPTION  NET LOSS	\$1,831,925 1,137,369 \$ 694,556
WITH WORK-LIFE ADJUSTMENTS  LESS PERSONAL MAINTENANCE  NET LOSS	\$1,167,548 <u>146,588</u> \$1,020,960
WITH WORK-LIFE ADJUSTMENTS  LESS PERSONAL CONSUMPTION  NET LOSS	\$1,167,548 714,225 \$ 453,323

### REAL WAGE AND REAL INTEREST RATES 1960-1999



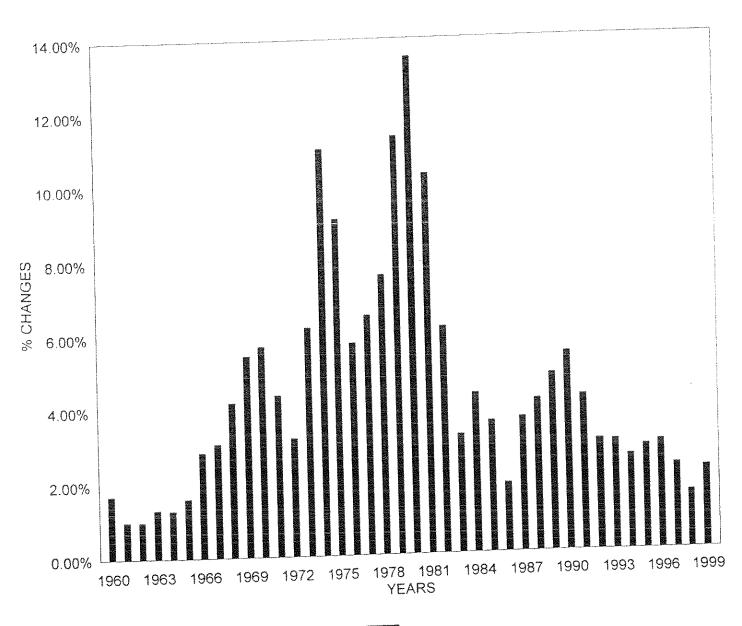
Real Wage A Real Interest

## WAGE, INTEREST, AND INFLATION RATES 1960-1999



### ANNUAL RATE OF PRICE INFLATION

1960-1999



### CALCULATION OF TREND RATES OF REAL WAGE GROWTH. REAL INTEREST (DISCOUNT) RATES. AND THE NET DISCOUNT RATE

	WAGE!		INTEREST/DISCOUNT?		CPI <sup>3</sup>		a.c. yezytetelenek	
YEAR	moex	PERCENT (NOREASE	INDEX	PATE	INDEX	PERCENT INCREASE	PEAL WAGE CHAILGE	REAL INTEREST CHANGE
			1 0000		72.60			
1979	49 00		1 1205	12.05	82 40	13 50	5 da	-1 45
1980	54 30	10.82		14.75	90.90	10.32	.0.74	4 43
1981	59.50	9 5A	1 2858		96.50	6 16	1.73	4 98
1982	63.90	7.39	1 4290	11.14	99.60	3.21	107	5 73
1983	66 60	4.23	1.5568	8 94		4.32	11 (1) }	5 66
1984	69 50	4.35	1 7121	9.98	103.90	3 56	133	117
1985	72,90	4 RQ	1 8445	7 73	107 60		7 10	4 30
1986	76 70	5.21	1 9581	6 16	109.60	1 86	0, 75	2.34
1987	79 70	3.91	2 0754	5 99	113 60	3 65		2.78
1988	83.40	4.64	2.2190	6 92	118 30	4.14	14 (11)	
	85 70	2.76	2,4056	8 41	124 00	4 82	7 176	3 59
1989	90.60	5.72	2.5923	7.76	130.70	5.40	0.32	2 36
1990		4.75	2 7367	5 57	136.20	4.21	17.53	1 36
1991	94 00		2.8336	3 54	140.30	3 01	0	2 53
1992	100 00	5.37		3 09	144,50	2 99		0 10
1993	102.40	2.40	2.9211	4 40	148.20	2.56	951	184
1994	104 50	2.05	3 0497	567	152 40	2.83	0.55	2.84
1995	106 70	2.11	3 2226		156.90	2 95	() 1	2.32
1996	110.10	3 19	3.3892	5 17	160.50	2.29	1 13	2 93
1997	114.20	3.72	3.5661	5 22		1 56	3,79	3 39
1998	120 30	5.34	3.7426	4 95	163.00	2,21	× 7/3	2 57
1999	126 30	1 00	3 9215	4 78	166 60			2.83
AVERAGE	Ī	4.85		7.07		4 24	001	203

Net Discount Rate: 2.22%/Year If real wage growth is zero, the Net Discount Rate becomes 2.83%/Year

Update of 2/17/2000.

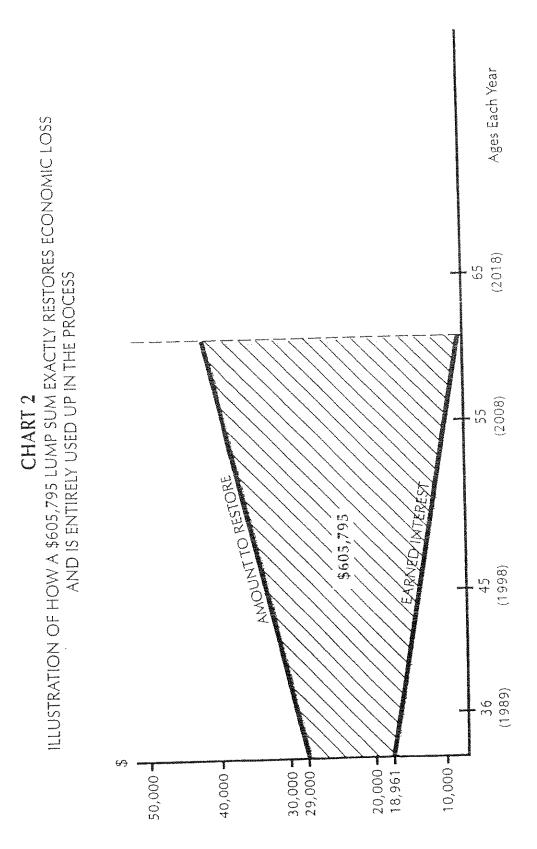
<sup>&#</sup>x27;Wage Hourly Compensation: Industry Analytical Ratios for the Business Sector--All Persons, Bureau of Labor Statistics, February 8, 2000.

<sup>&</sup>lt;sup>2</sup>Interest (Discount) Rates: Bond Yields and Interest Rates, 1929-99, Economic Report of the President, 2000, pg. 390.

<sup>&</sup>lt;sup>3</sup>CPI: Consumer Price Index, All Urban Consumers (CPI-U), Bureau of Labor Statistics.

APPENDIX V

Illustration from Brookshire 1990 Book\* of Chart to be Prepared for Trial, Explaining How Lump Sum (Present Value) Losses, and all Earned Interest, are Exhausted in Restoring Annual, Economic Losses





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May 16,2000

Edwin L. Hoseus, Jr., Esquire 741 Milford Hills Drive Milford, Ohio 45150-1446

Dear Mr. Hoseus:

Enclosed is supplemental Table 1 to our April 27, 2000 report. Also enclosed is another copy of our April 27 cover letter, which explains that at least some portion of this \$55,128 is an additional loss to the surviving children.

Sincerely,

Michael L. Brookshire, Ph.D.

Forensic Economist

George A. Barrett, M.B.A.

Forensic Economist

Enclosures

TABLE 1 PRESENT VALUE OF CHILD SUPPORT PAYMENTS 1999 - 2006

YEAR ****	AGE ***	CHILD SUPPORT *****	DISCOUNT FACTOR ******	PRESENT VALUE *****	CUMULATIVE
1999 2000 2001 2002 2003 2004 2005 2006	37 38 39 40 41 42 43 44	\$6,067 9,424 9,424 9,424 9,424 5,688 4,550 4,550	1.00000 1.00000 0.97248 0.94572 0.91969 0.89438 0.86976 0.84583	\$6,067 9,424 9,165 8,912 8,667 5,087 3,957 3,849	\$6,067 15,491 24,656 33,568 42,235 47,322 51,279 \$55,128
C. WAL	LACE			\$55,128	



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April 27, 2000

Edwin L. Hoseus, Jr., Esquire 741 Milford Hills Drive Milford, OH 45150-1446

RE: CHRISTOPHER WALLACE

Dear Mr. Hoseus:

Enclosed is our written report of net lost earning capacity in the Christopher Wallace case. We will be sending a separate, letter report calculating the value of his child support payments. Because this value cannot be linked with the consumption deductions in a scientific way that prevents overlaps, we report this separately. Some or most of this value should be added to the enclosed, economic loss values.

Please call us if you have any questions.

Sincerely,

Michael L. Brookshire, Ph.D.

Forensic Economist

George A. Barrett, MBA

Forensic Economist

MLB/qf